

NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE STANDARD

TREE/SHRUB PRUNING

(Acre)

CODE 660

DEFINITION

Removing all or parts of selected branches from trees and shrubs.

PURPOSES

- Improve appearance of trees or shrubs, e.g., ornamental plants and Christmas trees.
- Improve the quality of the wood products.
- Improve the production of plant products, e.g., nuts, fruits, boughs and tips.
- Reduce fire and/or safety hazards.
- Improve the growth and vigor of understory plants.
- Adjust the foliage and branching density for other specific intents, such as wind and snow control, noise abatement, access control, and visual screens.

CONDITIONS WHERE PRACTICE APPLIES

On any area with trees or shrubs.

CRITERIA

General Criteria Applicable to All Purposes

The pruning and shearing method and timing will match the limitations of the site and soils, achieve purposes for the specific tree or shrub species, and be conducted in a safe and efficient manner.

Pruning or shearing will not adversely reduce the growth and vigor of the tree or shrub for the intended purpose.

Debris and vegetative material left on the site after treatment will not present an unacceptable fire or pest hazard or interfere with the intended purpose and other management activities.

Comply with applicable federal, state and local laws and regulations during the installation, operation and maintenance of this practice.

Additional Criteria Applicable to Pruning Black Walnut for High Quality Wood Products

Prune black walnut and other hardwoods where site index is greater than 75.

Pruning should be done during the dormant season (late fall after leaf fall through mid winter). Never prune during the fast growing season of late spring or early summer.

Use a pruning saw to remove limbs. Do not cut the stub flush with the tree. Cut just outside the branch collar. See Figure 1.

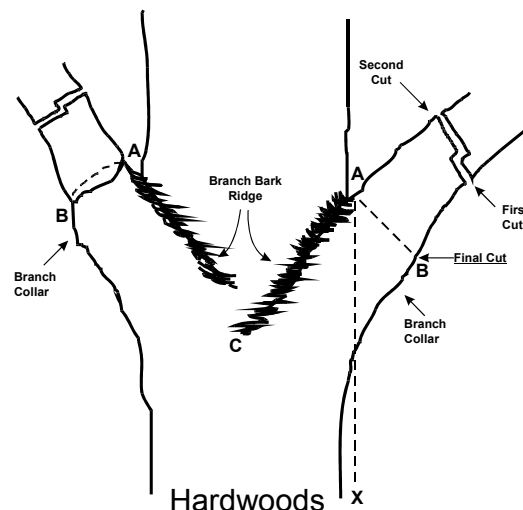


Figure 1. — Hardwood pruning (See figure 2 for conifer pruning).

Prune trees according to the following steps:

1. **Locate the branch bark ridge**
2. **Find A (outside edge of branch bark ridge).**
3. **Find B (swelling where branch meets branch collar). Stub the branch to be pruned using a first cut from below and a second cut from above.**
4. **Make the final cut on line AB.**
5. **Do not cut behind the branch bark ridge.**
6. **Do not leave stubs.**
7. **Do not cut into the branch collar.**

Prune trees when less than 10" diameter breast height (DBH) and preferably less than 6" DBH. Remove lower limbs less than 2 inches in diameter, and preferably one inch in diameter.

Never prune more than half the tree's total height or more than 20 percent of the live crown in one growing season.

The first pruning should be at least 9 feet if possible, but if practical and within the guidelines for the statement above, prune to 17 feet.

Pruning should be restricted to no more than 100 crop trees per acre.

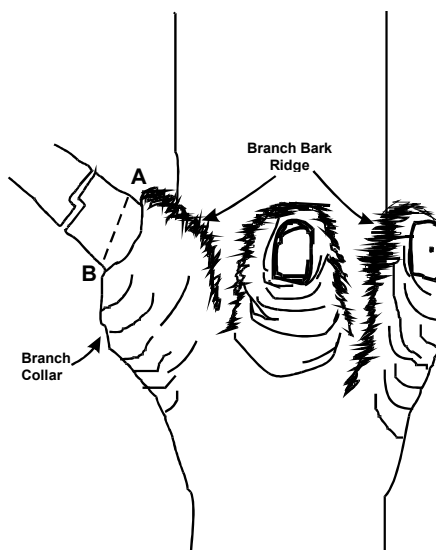
Corrective terminal pruning may be done at any age prior to side-limb pruning.

Additional Criteria Applicable to Pruning Conifers for High Quality Wood Products

Prune white and red pine where site index is greater than 65. Prune Norway spruce where site index is greater than 75.

Conifers may be pruned during any season, however, late summer, fall, and early winter are recommended.

Use a pruning saw to remove limbs. Do not cut the stub flush with the tree. Cut just outside the branch collar. See Figure 2.



Conifers

Figure 2. — Conifer pruning.

Prune trees according to the following steps:

8. **Locate the branch bark ridge**
9. **Find A (outside edge of branch bark ridge).**
10. **Find B (swelling where branch meets branch collar). Stub the branch to be pruned using a first cut from below and a second cut from above.**
11. **Make the final cut on line AB.**
12. **Do not cut behind the branch bark ridge.**
13. **Do not leave stubs.**
14. **Do not cut into the branch collar.**

Do not remove more than the lower half of the live branches at any one time.

The first pruning should be applied when the trees are 20 to 30 feet in height. Remove branches 7-9 feet in height. Plan later operations to remove branches to 17 feet limiting pruning to two operations. Attempt to prune branches before they become 1 ½ inches in diameter.

Only potential crop trees should be pruned. In the average pine plantation, 100 – 150 crop trees should be selected for pruning.

All slash should be lopped to no more than 2 feet above the ground to reduce fire hazard and stimulate decomposition.

Additional Criteria Applicable to Pruning / Shearing to Improve the Quality of Christmas Trees

The growing of Christmas trees is a specialized business. These specifications are general in nature. "Christmas Tree Culture and Marketing", WVU-CES, Publication 525 is a good source of information regarding the culture and care of Christmas trees.

Shearing - Most Christmas trees are sheared annually beginning when trees are around 2 feet tall. Shear pines between early June and mid-July before new growth hardens. Spruces and firs, including Douglas-fir, maybe sheared during the dormant season, August to early April. Make cuts just above a single bud. Start pruning Scotch pine when new needle growth is $\frac{3}{4}$ as long as last years needle growth.

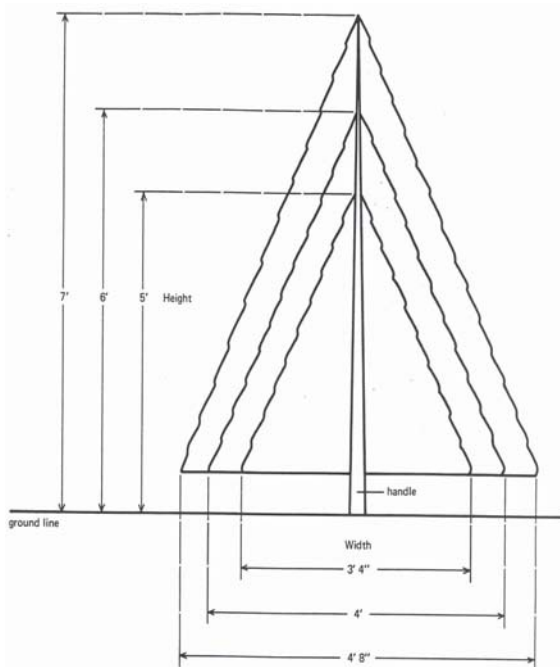


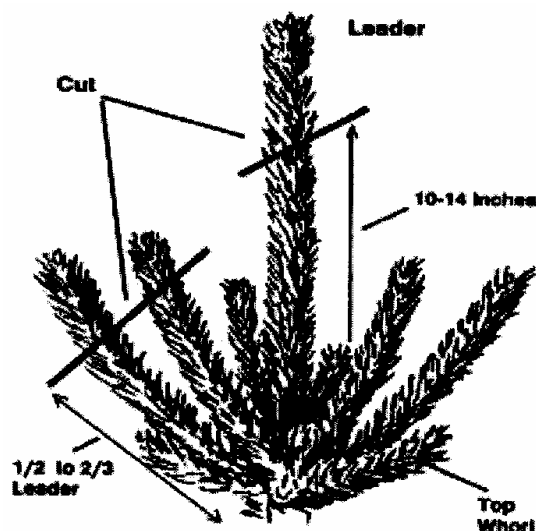
Figure 3. Ideal Christmas tree shape – the tree should be 1 ½ feet high for each foot of width.

Reducing Leader Growth

Spruce or fir – Select a group or cluster of buds (4 or more) at a point about 12 inches above the last whorl. These will form a false whorl the next season and increase

density. At least 2 ½ inches above this group of buds (or false whorl), select a strong bud. Cut the terminal leader about 1/8" above the bud and at a 45 degree angle. Remove any buds between the tip and false whorl. Cut back several inches of the upper branch tips to prevent them from turning up to become leaders.

Pines – Cut leader off at 45 degree angle to encourage the formation of a single strong leader bud on the high point of the cut. Leader growth should be about 12 inches. The top whorl should be cut back about 40 percent as long as the sheared leader to prevent the tips from turning up as new leader growth. This should be done at the same time as shearing.



Basal Pruning – Unwanted branches between the bottom of the Christmas tree and ground can be removed. The selected basal whorl should be as low as practical, but still provide the needed handle. If wildlife management is a landowner objective this practice may be in conflict with suggested practices. See conservation practice standard for Upland Wildlife Habitat Management, code 645.

Additional Criteria Applicable to Pruning to Improve the Aesthetics of an Area or for the Reduction of Fire Hazard

Remove limbs to any height necessary. Pruning practices may be in conflict with wildlife management objectives. See conservation practice standard for Upland

**Wildlife Habitat Management Standard,
code 645.**

CONSIDERATIONS

Pruning and shearing should be timed to minimize disturbance to seasonal wildlife activities.

Pruning and shearing tools should be disinfected to prevent the spread of pathogens.

Review the estimated cost and projected economic benefits of the project before starting a pruning or shearing project.

To maintain plant growth and sustain vigor, pruning and shearing may be done in two or more timed intervals.

Time pruning and shearing to minimize potential damage to the tree bole and stems.

Debris and other vegetation (biomass) removed may be used to produce energy.

The timing of pruning should consider the nesting and breeding requirements of arboreal species.

In urban areas special considerations need to be given for safety hazards.

Pruning practices may be in conflict with wildlife management objectives. See conservation practice standard for Upland Wildlife Habitat Management, code 645.

PLANS AND SPECIFICATIONS

Specifications for applying this practice shall be prepared for each site and recorded using approved specification sheets, job sheets, narrative statements in the conservation plan, or other acceptable documentation.

The following will be identified in the conservation plan narrative (as appropriate):

- ***Purpose***
- ***Species***
- ***Site Limitations***
- ***Methods***
- ***Equipment***
- ***Number of trees***
- ***Pruning Height***
- ***Season (Dates)***
- ***Operation and Maintenance Requirements***
- ***Any relevant environmental documentation including but not limited to the WVCPA-052 or similar form***

OPERATION AND MAINTENANCE

Periodically inspect plant condition and take additional actions as necessary, e.g., additional pruning, pest management, nutrient management and forest stand improvement.

REFERENCES

Black Walnut As A Crop, USDA-USFS, General Technical Report NC-4, 1973.

Christmas Tree Culture and Marketing, WVU-CES, Publication 525.

Forest Management Handbook, West Virginia Division of Forestry, 1985.

Forest Management Update, Arlyn Perkey, USDA-USFS, Morgantown, WV, No. 4, September 1985.

Growing Walnut for Profit and Pleasure, American Walnut Manufacturing Association.

Time studies of Hand and Power Pruning Crop Trees in Plantations, W.A. Lemmien, V.J. Rudolph, Journal of Forestry, June 1963.

****Bold italics indicate changes made or information added to the national standard by West Virginia.***